Fig.1

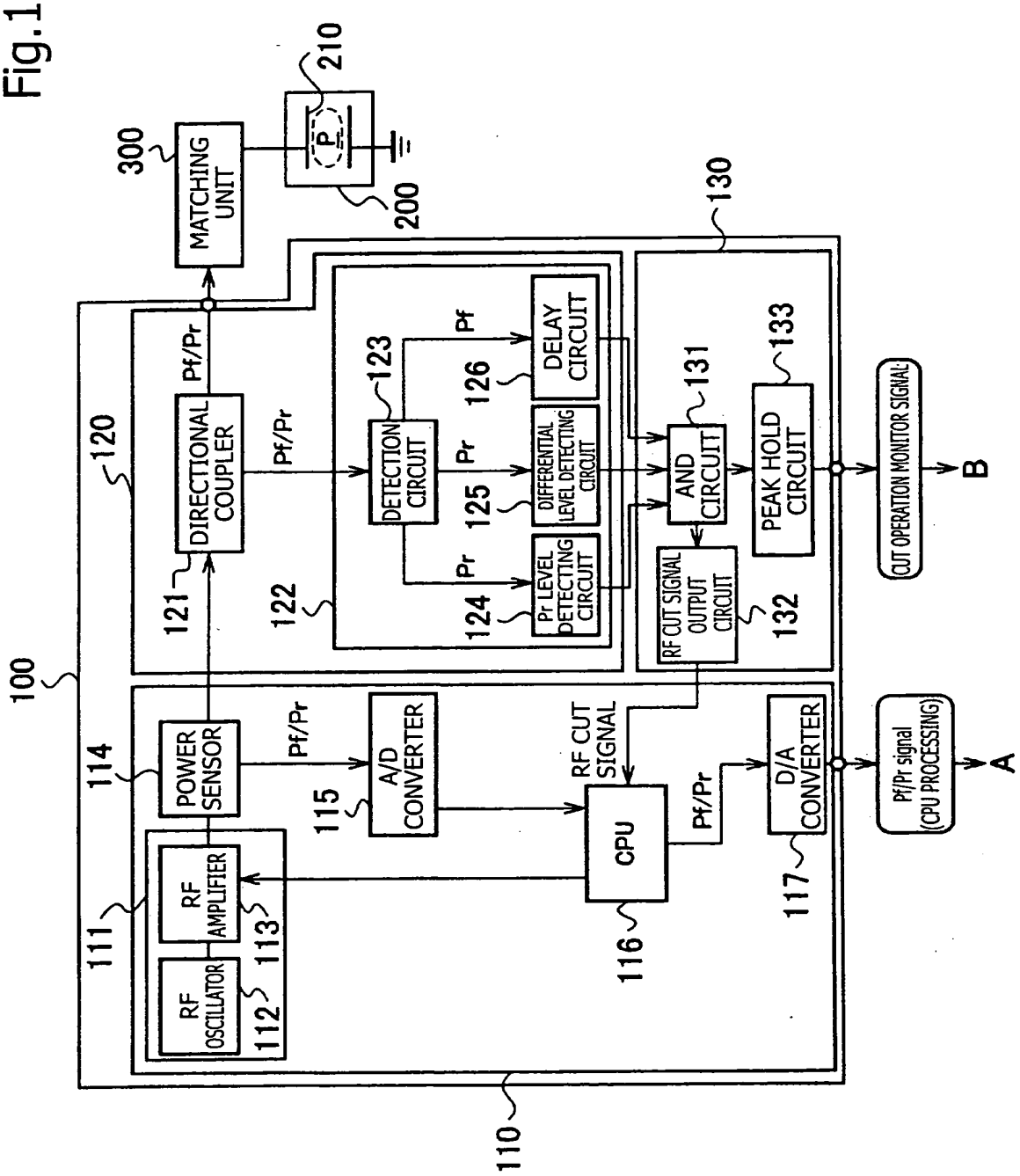

100
110
111
RF OSCILLATOR
112
RF AMPLIFIER
113
114
POWER SENSOR
115
A/D CONVERTER
116
CPU
117
D/A CONVERTER
120
DIRECTIONAL COUPLER
121
122
DETECTION CIRCUIT
123
124
Pr LEVEL DETECTING CIRCUIT
125
DIFFERENTIAL LEVEL DETECTING CIRCUIT
126
DELAY CIRCUIT
130
AND CIRCUIT
131
RF CUT SIGNAL OUTPUT CIRCUIT
132
PEAK HOLD CIRCUIT
133
MATCHING UNIT
300
200
210
Pf/Pr
Pr
Pf
RF CUT SIGNAL
CUT OPERATION MONITOR SIGNAL
B
Pf/Pr signal (CPU PROCESSING)
A

Fig.2

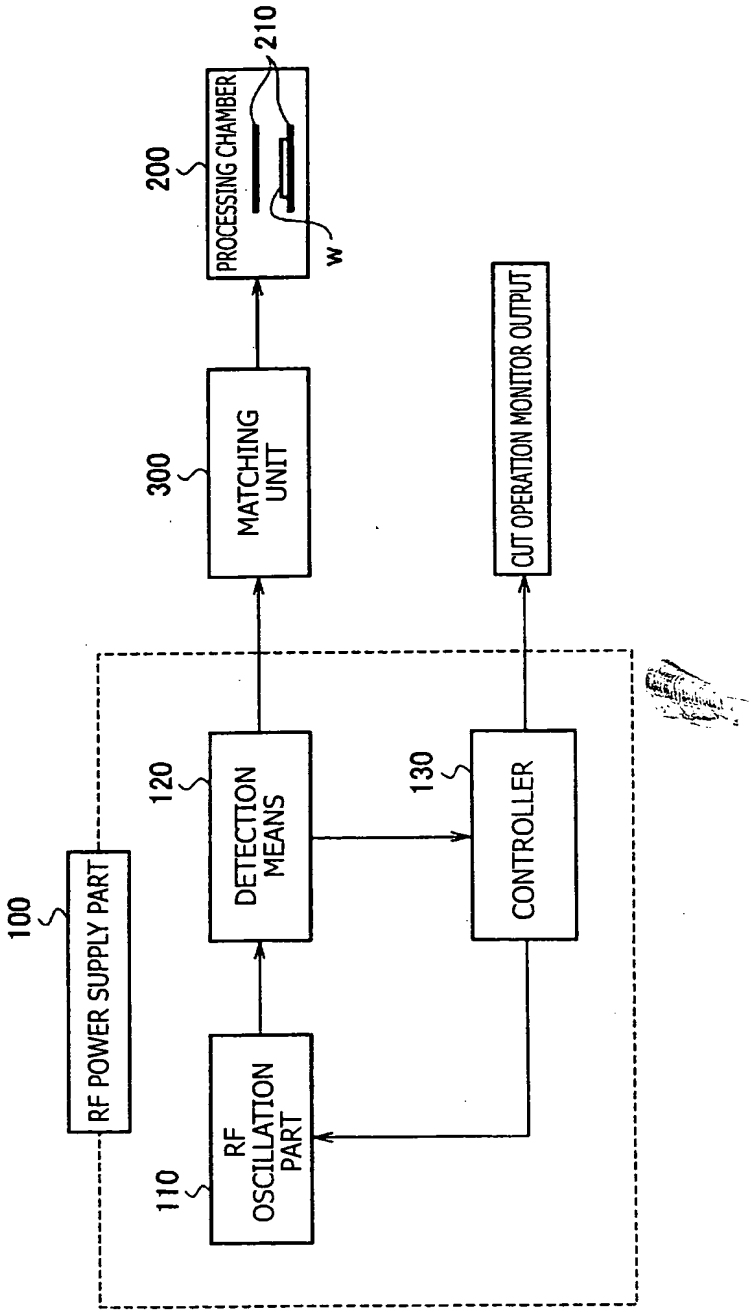

100
RF POWER SUPPLY PART
110
RF OSCILLATION PART
120
DETECTION MEANS
130
CONTROLLER
CUT OPERATION MONITOR OUTPUT
300
MATCHING UNIT
200
PROCESSING CHAMBER
210
W

Fig.3

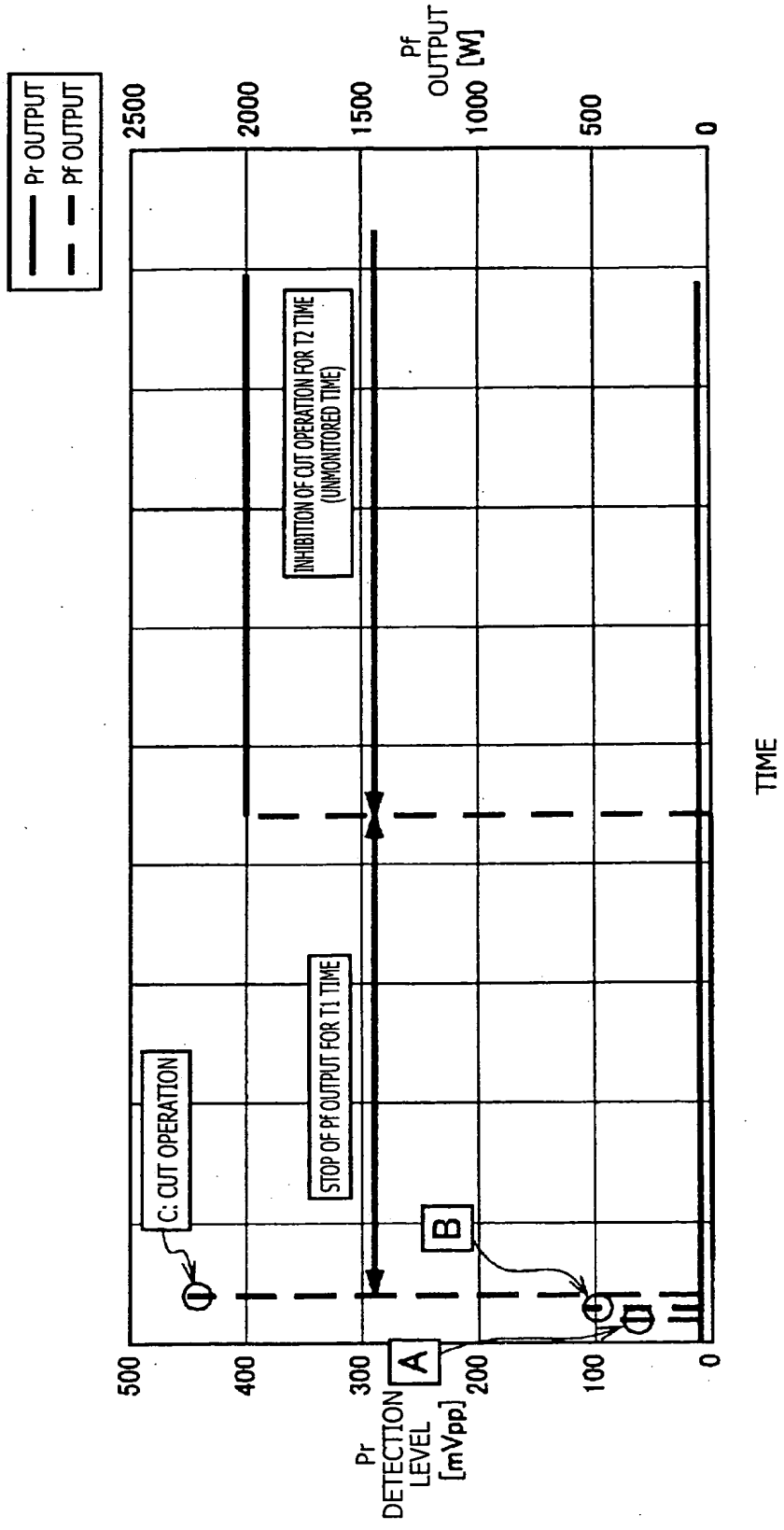

Pr OUTPUT
Pf OUTPUT
Pf OUTPUT [W]
2500
2000
1500
1000
500
0
INHIBITION OF CUT OPERATION FOR T2 TIME (UNMONITORED TIME)
STOP OF Pf OUTPUT FOR T1 TIME
C: CUT OPERATION
A
B
Pr DETECTION LEVEL [mVpp]
500
400
300
200
100
0
TIME

Fig.4

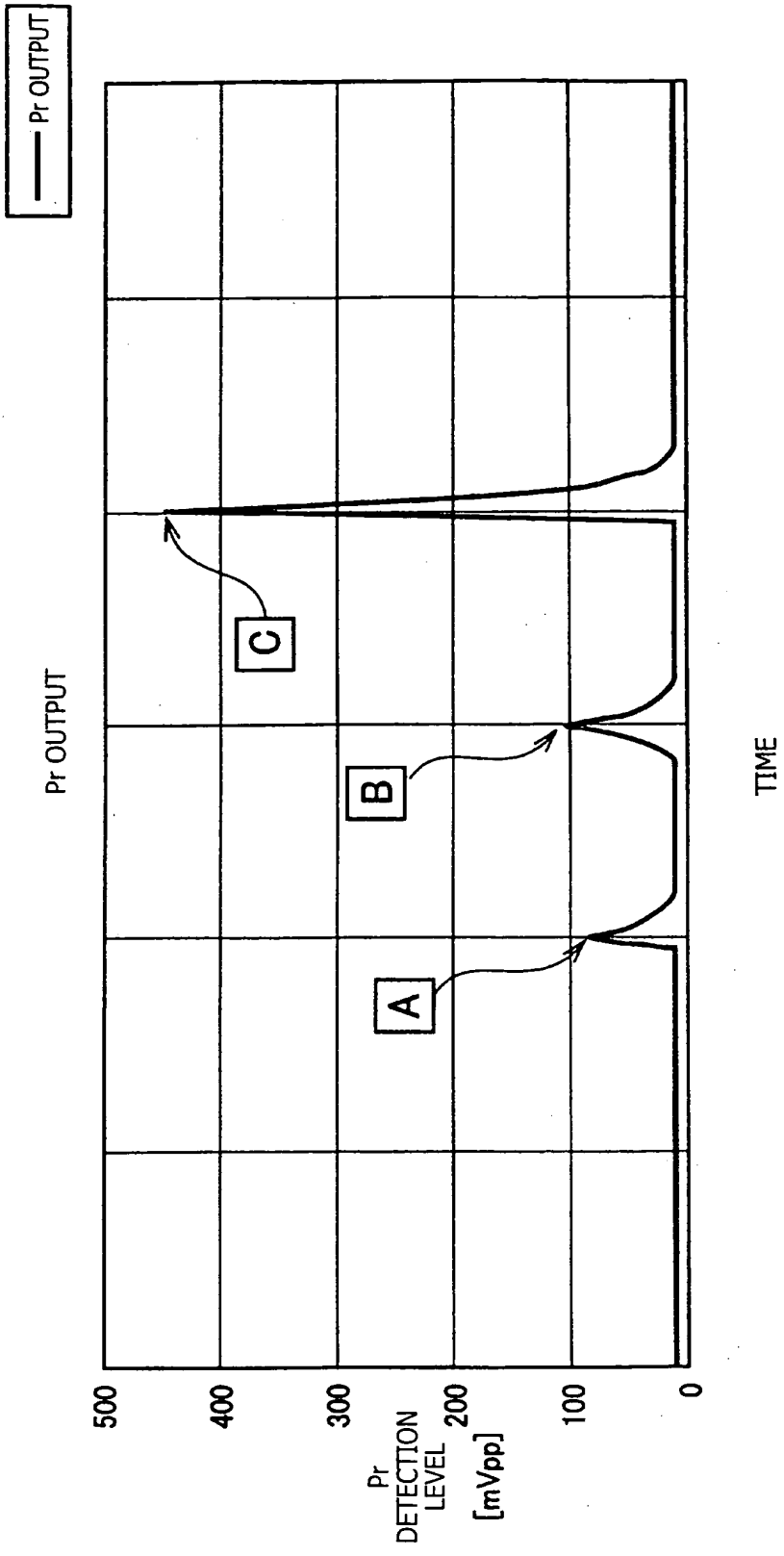

Pr OUTPUT
Pr OUTPUT
A
B
C
500
400
300
200
100
0
Pr DETECTION LEVEL [mVpp]
TIME

Fig.5

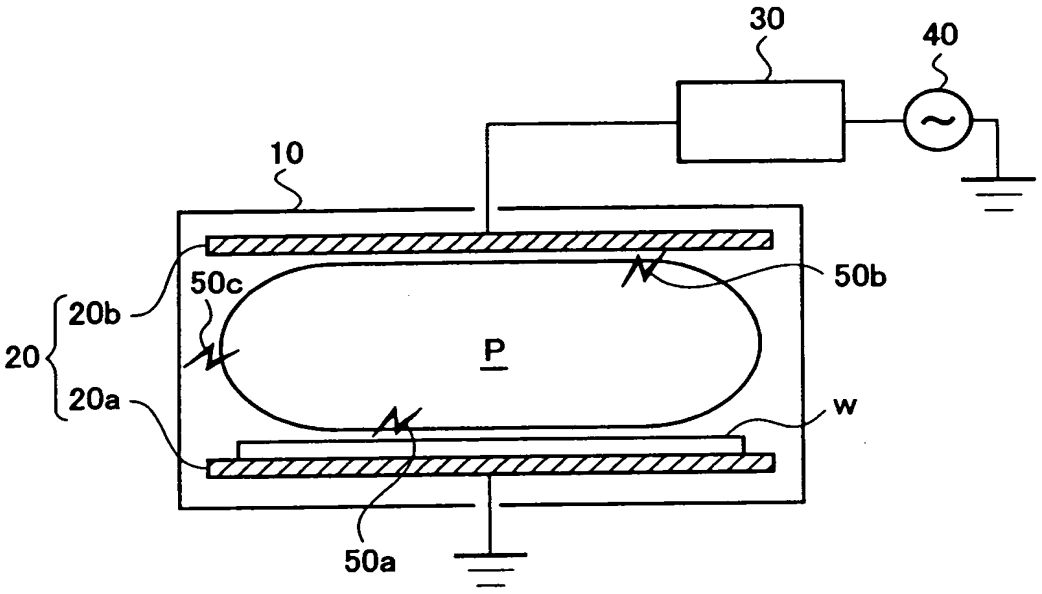
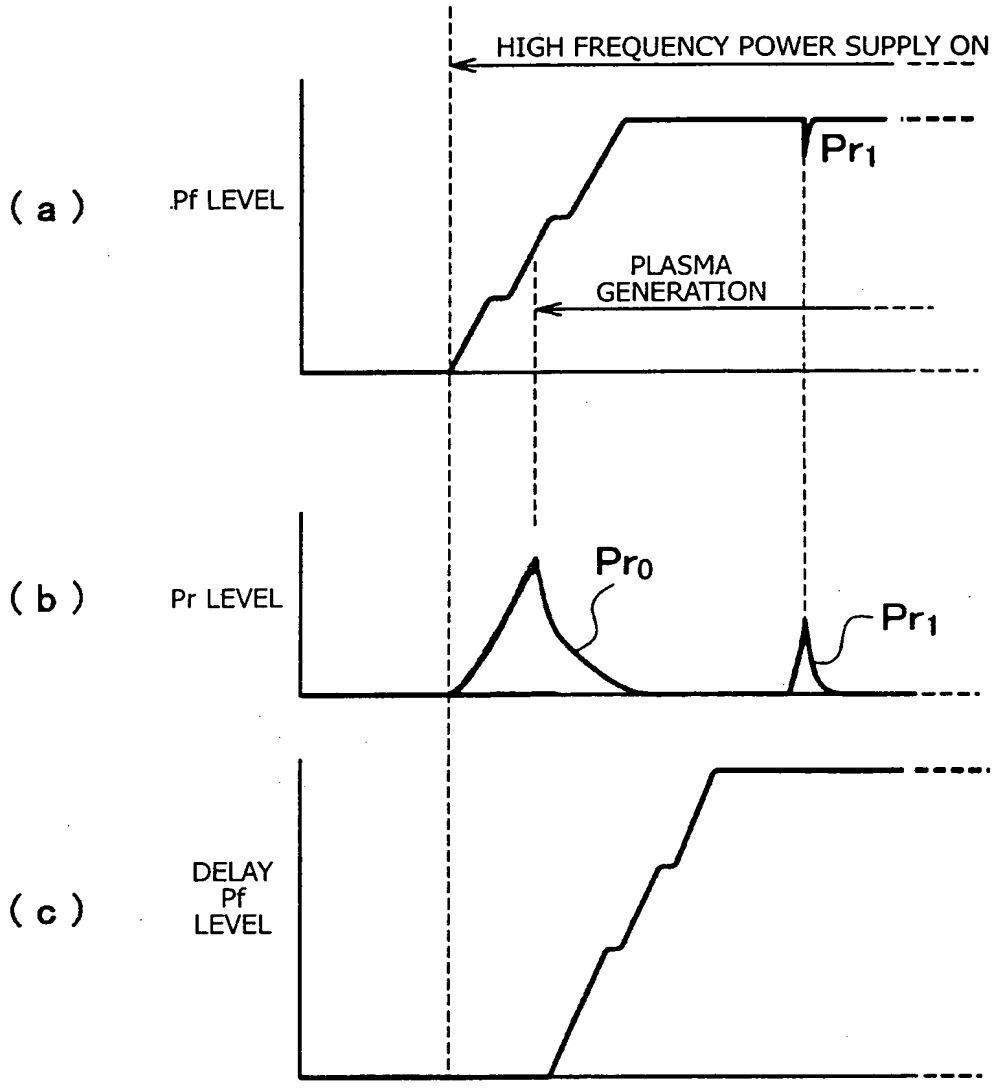


Fig.6


HIGH FREQUENCY POWER SUPPLY ON
(a)
Pf LEVEL
Pr1
PLASMA GENERATION
(b)
Pr LEVEL
Pr0
Pr1
(c)
DELAY Pf LEVEL